Quad Charts

PAP 01 through PAP 16

May 11, 2010

Program Manager Office

Status of PAP01: Role of IP in the Smart Grid

Updated April 13, 2010.

A#	Current Activities and Accomplishments
A3	Completed initial set of application requirements for select scenarios by Open SG-Net
A4	Compiling additional requirements from industry documents in cooperation with Open SG-net Working Group

S	D#	Deliverables
	D1	Application communication requirements matrix
	D2	Modular suite of IP protocols in support of different application categories
	D3	Standards gap analysis
✓	D4	Identify Core set of IP protocols

I#	Issues, Concerns & Help Needed
I1	Need to develop guidelines on the use of IPv4 versus IPv6
I2	Need to compile and use requirements for systems and network management functions in order to develop protocols and guidelines for SG management and security

S	T#	Task	Plan	Actual	Resp	D#
	T1	Develop a set of requirements for different Smart Grid applications	June-2010		Open SG-net	D1
✓	T2	Identify a core Protocol Suite for IP-based Smart Grid	Dec-2009	Dec-2009	IETF	D4
	T3	Develop application specific protocol requirements	Jul-2010		Open SG-net	D1
	T4	Perform gap analysis	Jul-2010		IETF	D1, D4

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			

Status of PAP02: Wireless Communications for the Smart Grid (6.1.5)

Updated April 8, 2010.

A#	Current Activities and Accomplishments
A1	Completed wireless capabilities matrix
A2	Developed an approach to Modeling Wireless Communications – Feb 2010
A3	Reached agreement on the approach to use for the evaluation of wireless technologies - Feb 2010
A4	Initial set for selected applications such as AMI completed with Open SG-Net Feb 2010
A5	Compiling requirements from industry documents in cooperation with Open SG-net Working Group.

S	D#	Deliverable
	D1	Application communication matrix
	D2	Wireless capability matrix
	D3	Standards development guidelines
	D4	Description of Deliverable 4

I#	Issues, Concerns & Help Needed
I1	Call for input to Task 1 to compile additional application communication requirements with specific quantitative data needed for further evaluating wireless communication technologies
I2	Call for input to Task 6 to contribute tools and methods and conduct the evaluation of wireless technologies based on the application requirements

S	T#	Task	Plan	Actual	Resp	D#
	T1	Segment the smart grid and wireless environments into a minimal set of categories for which individual wireless requirements can be identified.	June 2010		Open SG	D1
	T2	Develop Terminology and definitions	June 2010		Open SG	D2
	T3	Compile & communicate use cases and develop requirements for all smart grid domains in terms that all parties can understand	June 2010		Open SG	D1
☑	T4	Compile and communicate a list of capabilities, performance metrics, etc. in a way that all parties can understand. - Not quantifying any standard, just defining the set of metrics	Mid 2010		IEEE 802 Wireless Series	D2

✓	T5	Create an inventory of wireless standards and their associated characteristics (defined in previous task) for the environments identified in task 1	Mid 2010		IEEE 802 Wireless Series	D2
	T6	Perform the mapping and conduct an evaluation of the wireless technologies based on the criteria and metrics developed in task 4	Jun-2010		IEEE 802,3GPP,3GPP2	D1

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			

Status of PAP03: Develop Common Specification for Price and Product Definition

Updated April 23, 2010.

A#	Current Activities and Accomplishments
A6	PAP03 has met seven times, most recently on April 7, 2010
A7	Data model draft from OASIS EMIX TC February 2010
A8	NAESB Use Cases and Requirements Delivered April 2010

S	D#	Deliverable
✓	D1	High level scoping document
✓	D2	Price use cases and requirements
●	D3	Information model and summary of product characteristics of interest to energy consumers
●	D4	Draft price and product defintiion specification to others

I#	Issues, Concerns & Help Needed
I1	Need focused coordination with DER & PEV PAPs and to include specific tasks in PAP09 and PAP11
I2	Status and details on T6, T8, T10 are not visible

S	T#	Task	Plan	Actual	Resp	D#
✓	T2	Develop price and product definition use cases&requirements	2009-11	2010-04	NAESB	D2
✓	T4	Plan to import and use material from PAP04	2009-12	2009-12	NAESB	D2
✓	T5	Plan to import and use material from PAP04	2009-12	2009-12	OASIS	D2
●	T6	Plan to import and use material from PAP04	2009-12		ZigBee	D2
✓	T7	Data model draft publicly visible	2010-02	2010-02	OASIS	D3
●	T8	Data model draft publicly visible	2010-02		ZigBee	D3
●	T9	Draft price and product definition specification to others	2010-04		OASIS	D4
●	T10	Draft price and product definition specification to others	2010-04		ZigBee	D4

Status	Schedule	Deliverables	Resources
January 2010	●	●	●
February 2010	●	●	●
March 2010	●	●	●
Mid-April 2010			

Status of PAP04: Develop Common Scheduling Mechanism for Energy Transactions

Updated April 23, 2010.

A#	Current Activities and Accomplishments
A1	Updated pre-existing IETF standard (RFC 5545)
A2	Identified pre-existing work from enterprise domains
A3	Cross-referencing schedules, documents and contracts in a message
A4	Developing SG use cases for use by WS-Calendar
A5	Schedule requirements out for public review
A6	CalConnect updating three IETF standards
A7	CalConnect weekly meetings of TC-XML
A8	OASIS and CalConnect have completed a working agreement to share Technical Committee members
A9	OASIS TC initial meeting 2/26/2010
A10	Use Cases and requirements delivered April 2010
A11	Deliverable D3 completed April 2010

S	D#	Deliverable
✓	D1	Update pre-existing IETF standards for extensibility
✓	D2	Standard XML Serialization for Bi-directional Translation
	D3	Use cases and requirements to test the standard
	D4	Associated semantics for schedule performance related to WS-Calendar standard
	D5	Create essential WS APIs for Calendars and Schedules
	D6	Allign APIs and semantics across SDOs

I#	Issues, Concerns & Help Needed
I2	Other PAPs need to clarify their consumption of PAP04 output and coordinate as necessary.
I3	OASIS work would benefit from participation of representatives of manufacturing scheduling.
I4	ISO2002 participation in OASIS TC would improve scope and acceptance of deliverable.
I5	Intermediate delivery of T5 will decouple final stages from rest of PAP04

S	T#	Task	Plan	Actual	Resp	D#
✓	T1	Update IETF iCalendar format to allow extensibility	2010-01	2009-09	CalConnect	D1
✓	T2	Standard XML serialization of extensible iCalendar out for public review	2010-01	2009-11	CalConnect	D2
	T3	Standard APIs for Calendar-to-Calendar communications	2010-04	2010-05	CalConnect	D4
	T4	Submit outputs of T2 and T3 to IETF for approval as RFCs	2010-05		IETF	D1
✓	T5	Develop Smart Grid use cases and requirements for for use in WS-Calendar	2009-10	2010-04	NAESB	D3
✓	T6	Create Committee to develop service-oriented schedule profiles based on IETF xCalendar and APIs (WS-Calendar)	2010-01	2010-01	OASIS	D5
	T7	WS-Calendar work out for public review, including NAESB re-submission	2010-04	2010-05	OASIS	D5

	T8	Submission of WS-Calendar public review draft to IEC Power Management CIM	2010-05		OASIS	D6

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
Mid-April 2010			

Status of PAP05

Updated May 7, 2010.

A#	Current Activities and Accomplishments
A1	AEIC AMTI group completing updated guidelines
A2	D7 contribution pending corporate review
A3	PAP05WG 'co-hosting' a multi-standard workshop to examine relevant standards in problems space
A4	AEIC AMTI group preparing a gap report alongside the guidelines for delivery to PAP05WG and other groups

S	D#	Deliverable
	D1	Utility requirements mapping
	D2	Expression of AEIC v2.0 Guidelines in terms of additional device class(es)
✓	D3	Revision of AEIC v1.0 Guidelines
	D4	Data type profiles for specific Use Case(s)
	D5	White Paper/Presentation on ANSI metering protocol standards
	D6	Webinar/White Paper/Presentation on new capabilities as developed during PAP05 work
	D7	Proactive marketing plan for this work
New	D8	Design Document
	D9	Analysis
	D10	Use Cases and Requirements
	D11	Gap Report

I#	Issues, Concerns & Help Needed
I1	Need responsible and Plan date for T8.
I2	AEIC final document will be ready in June
I3	Concern that PMO requirement of Use Cases and Requirements will prolong PAP05WG effort

S	T#	Task	Plan	Actual	Resp	D#
	T1	Map utility requirements expressed via AEIC Guidelines v2.0 to Device Classes	5/31/2010		AEIC AMTI	D1
	T2	Express AEIC Guidelines v2.0 in terms of one or more additional Device Classes	5/31/2010		AEIC AMTI	D2
✓	T3	Complete revision of AEIC Guidelines v2.0 [01/22/2010 clarification: Requirements and Objectives]	12/2009	12/11/2009	AEIC AMTI	D3
	T4	Minimize the variations in data types transported from and to End Devices (real-	1/31/2010	3/22/2010	AEIC AMTI	D4

		time communication and enterprise data representations). Note: this might be a profile of data types for a specific use case. Note: need to examine the one-way device use case. Note: AEIC group to discuss on 4/15/2010				
	T5	Socialize the existence of additional Tables within ANSI C12.21-2006 and C12.22-2008 via WP/PPT report. [01/22/2010 clarification: technical (AMTI bring into co-existence) and marketing]	5/31/2010		AEIC AMTI	D5
	T6	Socialize the existence and application of existing and the definition of new default sets, Device Classes, and profiles via web conferences / via WP/PPT report.	5/31/2010		AEIC AMTI	D6
	T7	Develop education package around ANSI C12.18-2006, C12.19-2008, C12.21-2006 and C12.22-2008.	4/15/2010	under internal review	Team Member	D7

NEW	T8	Minimize variation and maximize interoperability of Application Services and behaviors within ANSI C12.18-2006, ANSI C12.19-2008, ANSI C12.21-2006 and ANSI C12.22-2008.	TBD			D8
	T9	PAP05WG to analyze D3; will receive final deliverable 6/15/2010	7/15/2010		PAP05WG	D9
	T10	PMO direction to create Use Cases and Requirements	5/31/2010			D10
	T11	Create and deliver Gap Report	6/15/2010		AEIC AMTI	D11

Status	Schedule	Deliverables	Resources
March 2010			
April 2010			
May 2010			
June 2010			

SGiP NIST Smart Grid Collaboration Site NIST

Status of PAP06: Translate ANSI C12.19 to the Common Semantic Model of CIM and IEC 61850 (6.2.5)

Updated May 7, 2010.

A#	Current Activities and Accomplishments
A1	Sub-group formed to tackle Use Cases and Requirements
A2	F2F in Santa Clara will be used to evaluate AEIC deliverable and other requirements

S	D#	Deliverable
	D1	Key Use Cases
	D2	Requirements
	D3.1	Mapping between ANSI C12.19-2008 and IEC 61850
	D3.2	Mapping between ANSI C12.19-2008 and MultiSpeak v4
	D3.3	Mapping between ANSI C12.19-2008 and IEC 61968-9
	D4	Integration and harmonization roadmap

I#	Issues, Concerns & Help Needed
I1	Same key resources as PAP05WG makes progress difficult to achieve (everyone at the same meetings and conferences) Created focused sub-group on 4/30: P6WG1 Need to explore explicit recruitment of new resources during the month of May, especially during CW F2F
I2	Need to coordinate with PAP05WG , including explicit coordination requirements (review of PAP05WG deliverable 3)

S	T#	Task	Plan	Actual	Resp	D#
	T1	Identify key use cases (should occur before mappings are performed)	06/18		P6WG1	D1
	T2	Requirements development	06/18		P6WG1	D2
	T3.1	Define mapping between ANSI C12.19-2008 and IEC 61850 (relevant part) for the key use cases	TBD 6/25		TBD 6/25	D3.1
	T3.2	Define mapping between ANSI C12.19-2008 and MultiSpeak v4 for the key use cases.	TBD 6/25		TBD 6/25	D3.2
	T3.3	Define mapping between ANSI C12.19-2008 and IEC 61968-9 (minimally) for the key use cases	TBD 6/25		TBD 6/25	D3.3
	T4	Create roadmap to integrate and harmonize challenges with MultiSpeak, IEC and COSEM standards	TBD 6/25		TBD 6/25	D4

Status	Schedule	Deliverables	Resources
March 2010			
April 2010			
May 2010			

Status of PAP07: Energy Storage Interconnection Guidelines

Updated May 7, 2010

A	Current Activities and Accomplishments
A1	Completed Draft 1 of Scoping Document for Task 0. It is being reviewed and some appendices added - **EPRI** owes appendix material
A2	Completed draft of Key ES-DER Use Cases (Task 4, Deliverable 3) • **Action 1.2:** Agree on which fields within the standard UC description format • **Action 4.2:** Develop Use Case Steps and/or Activity/Sequence Diagrams for the key ES-DER Use Cases
A3	Completing IEEE 1547.4 and .6, and initiating 1547.8 as per IEEE rules • **Action 2.2:** PAP 7 members should encourage participation in the 1547.4 ballot pool • **Action 3.1:** Provide recommendations and information to IEEE SCC21 to be used in development of 1547.8 PAR
A4	Provided draft of Key ES-DER Use Cases to PAP 4 for addressing Cross-PAP issues related to Schedules

S	D#	Deliverable
✓	D1	Task 0 Activities: Development of Scoping Study Document (MS Word version)
✓	D2	Task 1a Use Cases: List of ES-DER Use Cases (organized by type) (MS Word version)
✓	D3	Task 4 Use Cases Descriptions for Key ES-DER Use Cases (MS Word version) - 1st draft complete
●	D4	Completing IEEE 1547.4 & .6 per IEEE rules See IEEE 1547 Web Page
●	D5	Initiated PAR for IEEE 1547.8 per IEEE rules See IEEE 1547 Web Page

I	Issues, Concerns & Help Needed
I1	See Task 4a: **PAPs 3, 4, & 9 Coordination**: Pricing and Scheduling models involving Demand Response for ES-DER systems, particularly with respect to ancillary services, such as var management, frequency regulation, and harmonic reduction
I2	See Task 4b: **PAP 10 Coordination**: Energy Usage models and interactions with Utilities and 3rd Parties which involve ES-DER usage and ancillary services
I3	See Task 4c: **PAP 11 Coordination**: Interactions involving PEV battery and charger capabilities
I4	See Task 4d: **PAP 16 Coordination**: Wind Plant interactions involving Energy Storage

S	T#	Task	Plan	Actual	Resp	D#
✓	T0a	Scoping Document Draft v1	Nov-2009	Nov 2009	PAP 7	D1
●	T0b	Scoping Document Draft v2 with additions	Mar-2010	Waiting for EPRI and other on-going input - expected by end of April	EPRI & others	D1
●	T1	Collect Use Cases with Brief Narratives	Mid-Feb-2010	Mid-Feb 1st draft	PAP 7 members to add UCs	D2
●	T2	Complete IEEE 1547.4 (Draft Guide for Design, Operation, and Integration of	Apr-2010	1547.4 is currently in ballot, as per IEEE	IEEE 1547	D4

		Distributed Resource Island Systems with Electric Power System) & .6 (Draft Recommended Practice For Interconnecting Distributed Resources With Electric Power Systems Distribution Secondary Networks)		1547 balloting schedule, and due for final release by July/August 2010. 1547.6 is in pre-ballot and is expected to be released by December 2010		
☑	T3	Initiate IEEE 1547.8 to address interconnection issues of storage (title not known yet)	Feb-2010	IEEE PAR approved in March, with first meeting scheduled for August 2010	IEEE 1547	D5
☑	T4	Prioritize and develop details for key ES-DER Use Cases	Mar-2010	April 5 2010	NIST & PAP 7	D3
	T4a	Provide key ES-DER Use Cases to PAPs 3, 4, and 9, and discuss whether the ES-DER schedules and pricing signal requirements are covered adequately	April 2010		PAP 7, PAPs 3, 4, 9	D3
	T4b	Provide key ES-DER Use Cases to PAP 10 and discuss whether ES-DER issues are adequately covered under Energy Usage	April 2010		PAP 7, PAP 10	D3
	T4c	Provide key ES-DER Use Cases to PAP 11 and discuss if	April 2010		PAP 7, PAP 11	D3

		additional PEV Use Cases need to be added to ES-DER Use Cases				
	T4d	Provide key ES-DER Use Cases to PAP 16 and discuss if any addition actions need to be taken by PAP 16 for handling Wind plus ES-DER	April 2010		PAP 7, PAP 16	D3
	T4e	Develop Activity/Sequence Diagrams for key ES-DER Use Cases	April 2010		PAP 7	D3
	T4f	Hand off Activity/Sequence Diagrams for key ES-DER Use Cases to IEC TC57 WGs 14 & 17	May 2010		PAP 7	D3
	T5	Develop codes and test methods to ensure safe and reliable implementation of Task 3	Aug-2010		UL, NEC-NFPA70, SAE, and CSA	D5

Status	Schedule	Deliverables	Resources
January 2010	✓	✓	✓
February 2010			
March 2010			
April 2010			
May 2010			

Status of PAP08: CIM/61850 for Distribution Grid Management

Updated May 7, 2010

A	Current Activities and Accomplishments
A1	MultiSpeak UML modeling, CIM tools, updates to CIM modeling, and web conferences are on-going in IEC TC57 WG14.
A2	Have selected key ADA DOMA/FLIR/ VVWO Use Cases for refinement and have completed 100% of the necessary details in text form (using IntelliGrid template). These are being reviewed by the team. See D5 Deliverable.
A3	Have converted the Use Cases into UML Sequence Diagrams. After review by PAP 8 members, these will be submitted to IEC TC57 WG14 (CIM) for application-to-application interactions, and to IEC TC57 WG17 (61850) for distribution automation and DER interactions. See D6 deliverable

S	D#	Deliverable
	D1	UML Model of MultiSpeak
	D2	UML Tools for CIM (deliverable is internal to IEC TC57 WG14)
✓	D3	Interoperability Test of CIM Wires Model (completed Nov 2009 - refer to IEC)
	D4	Web conferences of CIM Modeling team (on-going as needed for new models)
✓	D5	Distribution_Grid_ManagementSG_UC_nm.doc: ADA DOMA/FLIR/ VVWO Use Cases with requirements for Distribution Grid Management
	D6	ADA_Functions_-_Sequence_Diagrams.pdf: ADA_Functions_-_Sequence_Diagrams.pdf Use Cases with appropriate details for IEC TC57 WGs (61850 and CIM)
	D7	IEC 61968, Parts 3 & 5, CIM updated standards to meet the PAP 8 Use Case application-to-application requirements
	D8	IEC 61850-7-4xx standards to meet the PAP 8 Use Case interactions with field equipment

I	Issues, Concerns & Help Needed
I1	There may need to some assistance, possibly from IEC TC57 WG19, on determining whether certain object modeling should be undertaken in WG 14 (CIM) or WG17 (61850)
I2	On-going, cross-PAP coordination is needed, particularly when Use Cases involve not only distribution operations but also demand response, load control, and other issues being addressed by other PAPs.
I3	IEC TC57 WG14 needs additional experts and additional time from existing experts to update the CIM (IEC 61968 Parts 3 & 5, as well as other parts) to meet the requirements described in the PAP 8 Use Cases (See Help Wanted Page)

S	T#	Task	Plan	Actual	Resp	D#
	T1	UML model for MultiSpeak	Jun-2010		NRECA	D1
	T2	Team for UML tools for CIM	Jun-2010		IEC TC57 WG14	D2
✓	T3	Team for interoperability testing	Nov-2009	Nov-2009	IEC TC57 WG14	D3
✓	T4	Web conference CIM Modeling team	Nov-2009	Nov-2009	IEC TC57 WG14	D4
✓	T5	Create SG use case team	Nov-2009	Nov-2009	Mini-T&D team	D5
✓	T6	Use Case master list	Jan-2010	Jan-2010	Mini-T&D team	D5
✓	T7	Key Use Cases prioritized and refined	Feb-2010	Feb-2010	UCI	D5
	T8	Review Use Cases and	Apr-		NIST,	D6

		complete Sequence Diagrams of those Use Cases	2010		PAP 8	
	T9	Provide completed Use Cases to the IEC TC57 WGs 14 & 17	May-2010		NIST, PAP 8	D6
	T10	Track progress on developing CIM and 61850 models from the Use Cases	Dec-2011?		IEC TC57 WG14 & 17	D7&8

Status	Schedule	Deliverables	Resources
January 2010	✓	✓	✓
February 2010			
March 2010			
April 2010			
May 2010			

Status of PAP09: Standard DR and DER Signals

Updated April 23, 2010.

A#	Current Activities and Accomplishments
A1	SEP2 Development on-going. Technical Requirements Document out for public review
A2	NAESB work substantially complete, awaiting standardization vote
A3	EnergyInterop building upon work of OpenADR
A4	Monthly PAP meetings with PAP03 and PAP04
A5	NAESB Use Cases and Requirements Delivered April 2010

S	D#	Deliverable
	D1	Standard Vocabulary for DR and DER
	D2	Direct Load Management Communication
	D3	Collaborative Load Management Communication
	D4	Grid safety Signals
	D5	DER support (deferred)
	D6	Other signals and/or an extensibility mechanism

I#	Issues, Concerns & Help Needed
I2	Note: PAP-15 calls for a standard DR interface
I3	Completion is dependent upon completion of EMIX (PAP03)
I4	Completion is dependent upon completion of WS-Calendar (PAP04)

S	T#	Task	Plan	Actual	Resp	D#
✓	T1	Collect, Analyze, and Consolidate Use Cases and deliver requirements (inc DER)	2009-10	2010-04	NAESB	D1
	T2	Direct Load Management: (Residential Applications) Message Semantics Work DR, DER	2010-04		Zigbee	D2
	T3	Collaborative Load Management: (C+I Applications) Message Semantics, DR, DER	2010-04		OASIS	D3,D6
	T4	Coordinate and merge Direct and Collaborative Load Management development tracks.	2010-04		NAESB	D1
	T5	Submit collaborative load management task outputs to IEC TC57 when completed	-		OASIS	D3
	T6	Submit direct load management outputs to IEC TC57 when completed	-		Zigbee	D2
✓	T7	Downstream user requirements/engagement	2009-10	2009-09	LonMark BACnet	D3
✓	T8	Downstream user requirements/engagement	2009-10	2009-10	Zigbee	D2
✓	T9	Additional message requirements for Distribution (none	2009-10	2009-10	MultiSpeak	D1

		required)				
	T10	Resale and process for safety and interconnection (deferred)	2009-10	DEFERRED	NAESB	D5,D4
	T11	Vocabulary for DR, DER actor names	2009-09		NAESB	D1

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
Mid-April 2010			

Status of PAP10: Standard Energy Usage Information:

Updated April 12, 2010.

A#	Current Activities and Accomplishments
A1	Reaching out to stakeholders including SDOs and User Groups
A2	Creating requirements and use cases
A3	Surveying current practices
A4	Consolidating use cases
A5	Producing information model for today's meters
A6	Outreach to Commercial, Industrial, Residential, and 3rd parties
A7	Produced use cases and requirements for facility interactions
A8	PAP Team has met sixteen times

S	D#	Deliverable
	D1	Use cases and requirements for standard energy usage information exchange
	D2	Short term plans for near-term customer access to usage data based upon todays installed meters
	D3	An Information model to satisfy present and future needs for exchange of energy usage information
	D4	Implement a plan to expedite harmonized standards development and adoption

I#	Issues, Concerns & Help Needed
I1	Consider energy export as well as import
I2	Require clarity from UCAIug IPR and contribution processes
I3	OpenADE proceeding without coordination with or use of PAPs 3, 4, 9
I4	NAESB requests help with Task T8; task not fully definied yet
I5	OpenADE 1.0 and 2.0 development is in advance of requirements
I6	OpenADE 1.0 and plans for 2.0 are much more than usage; PAP10 is on "fine graned and timely" access to usage information

S	T#	Task	Plan	Actual	Resp	D#
✓	T3	Reach out to additional stakeholders especially commercial, industrial, and residential	2010-01	2010-01	EIS Alliance	D1
✓	T4	Gather requirements and use cases for intra-premise scenarios that require inter-domain data exchange	2010-01	2010-01	EIS Alliance	D1
	T5	Survey current practice. Gather existing usage communications between energy suppliers and consumers, including providers of intermediary services	2010-05		NAESB	D1
	T6	Consolidate use cases and requirements for existing and planned energy communications	2010-06		NAESB	D1
	T7	Produce first delivery information model for today's meters and infrastructure (from utility information systems) Draft delivered April 2010	2010-02	2010-04	UCAIug	D2
	T8	Develop a plan to expedite harmonized standards development and adoption	2010-04		NAESB	D4

		within the associated standards bodies				

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
Mid-April 2010			

Status of PAP11: Interoperability Standards to Support Plug-in Electric Vehicles (6.2.4)*

Updated May 06, 2010.

A#	Current Activities and Accomplishments
A1	Assembled and organized PEV Use Cases from stakeholder inputs. Reformatting in NIST/EPRI template
A2	Joint Collaboration Agreement Between SAE and Smart Energy Profil signed.
A3	Tracking Smart Energy Profile 2.0 TRD developments
A4	Joint Collaboration with IEC TC57, WG 14, 17, 19, TC69 (PEV) October 2009
A5	Harmonization with CIM / IEC 61850 Onging
A6	Setting up Regulatory Affairs Task Force
A7	Face-to-Face meeting on February 4 in conjunction with OpenSG User group meetings.
A8	Collaborating with additional SDOs – IEEE, NEC, NFPA, Customer on fire, safety, building standards
A9	Face-to-Face meetings with EPRI Infrastructure Working Council. Met jointly in March 2010, next meeting June 2010.

S	D#	Deliverable
✓	D1	PEV use cases
✓	D2	Memo SAE and Smart Energy Profile
✓	D3	Map 61850 and 61968
✓	D4	Define all SDO related activities
●	D5	Use Cases in SGIP format
✓	D6	Organize Regulatory Advisors Task Force
●	D7	Drafting high level information model, evolve robust object models
●	D8	SAE Evaluation of PLC for PEVs
●	D9	Complete list of PEV Requirements
●	D10	Overcome collaborative impediments with IEC

I#	Issues, Concerns & Help Needed
I1	IEC organization / SGIP alignment
I2	Coordinate with PAP 15 – PLC communication. Provide requirements.
I3	Coordinate with PAP07 – Energy Storage. Provide requirements

S	T#	Task	Plan	Actual	Resp	D#
✓	T1	Assemble PEV related use cases	Dec-2009	Dec-2009	Arindam Maitre EPRI	
●	T1A	Use Cases in SGIP format	Jan-2010	Dec-2009	Nathan Tenney PNL	D5
●	T1B	SAE Evaluation of PLC for PEVs	Jul-2010	Jul-2010	Rich Scholer FRD	D9
✓	T2	Drafting high level information model, evolve robust object models	Feb-2010	May-2010	ZigBee SEP (Greg Robinson - Extensibel Solutions / Robby Simpson, GE)	D7
✓	T3	Need to overcome collaborative difficulties among SDOs	Aug-2009	Dec-2009	SAE (Jose Salazar, SCE)	D2
●	T3A	Need to overcome collaborative difficulties with IEC	Jun-2010	Jun-2010	Eric Simmon, NIST	D10
✓	T4	Produce 61968	Apr-	April-	TC57 WG	D3

		and 61850 documents for IEC meeting	2010	2010	14,17,19 (Greg Robinson)	
	T5	Reviewing regulations with regulators	May-2010	May-2010	NEMA (Ben Biroschak)	D6
☑	T6	Define all SDO related activities	Apr-2010	May-2010	SAE (Efrain Ornelas)	D4

Status	Schedule	Deliverables	Resources
May 2010			
June 2010			

Status of PAP12: DNP3 Mapping to IEC 61850 Objects

Updated May 08, 2010.

A#	Current Activities and Accomplishments
A1	Major progress with the new IEEE P1815 - standard for DNP3. Standard is out for 2nd recirculation and was been submitted to IEEE SA for review and approval on May 7th.
A2	Outline for the new IEC Technical Report (IEC 61850-80-5) is expected shortly.
A3	Coordination with PAP-7 - we are currently developing a guide on "how you use DNP for communications with inverters" to address current industry needs.
A4	Mapping document will address known requirements for inverter communications using IEC 61850.
A5	Mapping group continues to work on approach and details for the mapping.

S	D#	Deliverable
✓	D1	Use Case Diagrams and Data Flow Diagrams
	D2	Scope Description
	D3	Use Case Descriptions
	D4	XML File Gap Analysis
	D5	IEC 61850-80-5 New Work Item Proposal
	D6	IEC 61850-80-5 Mapping Specification
	D7	DNP3 Application Note - IEC 61850 Integration
	D8	Changes to IEC 61580 Specifications
	D9	Changes to DNP3 Specifications
	D10	Example DNP XML and SCL files

I#	Issues, Concerns & Help Needed
I1	Need contractor help to move the work along

S	T#	Task	Plan	Actual	Resp	D#
✓	T1	Create a proposed outline for a new scoping document.	Jan-2010	Jan-2010	Ron Farquharson	D2
✓	T2	Create data flow diagrams	Mar-2010	Mar-2010	Grant Gilchrist	D1
✓	T3	Create drafts of the use case descriptions based on the topology diagrams	Apr-2010		Grant Gilchrist	D3
	T4	Discuss and establish a date for real example DNP to 61850 mapping using the TMW tool	May-2010		Christoph Brunner, Jim Coates	D6
	T5	Define what key data types are required for SCADA	May-2010		Rick Murphy	D7
✓	T6	Modify existing architecture diagrams to add DNP to field devices, electronic security perimeter	Apr-2010		Rick Murphy	D1

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			

March 2010			
April 2010			

Status of PAP13: Harmonization of IEEE C37.118 with IEC 61850 and Precision Time Synchronization

Updated May 8, 2010.

A#	Current Activities and Accomplishments
A1	IEEE PSRC H11 (C37.118) are in the process of PAR revisions and IEEE Working Group changes in support of the decision to split standard (communications and measurement)
A2	IEEE PSRC H7/C7 - IEEE PC37.238 (Power Profile for IEEE 1588) is now Draft 3.0 and is in a pre-ballot review.
A3	IEEE PSRC Working Groups H11, H7/C7 and HTF3 are meeting next week at the PSRC meeting in Madison, WI (May 10th PAP-13 meeting is cancelled due to this).
A4	Next steps for the C37.118 Gap List (Enhancement) list is to decide which enhancements to implement on an updated C37.118 communications standard vs which to implement with IEC 61850-90-5 (new Technical Report for Phasor Data Communications)
A5	IEC WG10 mapping task force have new actions to update the use cases and define a roadmap for migration

S	D#	Deliverable
✓	D1	Harmonization requirements
	D2	C37.118 Enhancement (gaps) List
	D3	IEC 61850-90-5 Mapping document
	D4	1588 Time Sync Demo
	D5	1588 Power Profile
	D6	Amendments to IEC 61850 documents

I#	Issues, Concerns & Help Needed
I1	Need contracted help to move the work along

S	T#	Task	Plan	Actual	Resp	D#
✓	T1	Requirement document for Synchrophasors	Sep-2009	Oct-2009	Mark Adamiak	D1
	T2	Create IEC mapping document	May-2010		HTF3 - Joint IEEE/IEC	D3
	T3	Synchrophasor demo	July-2010		TBA	D3
	T4	IEEE PSRC H7 guideline	May-2010		IEEE H7/C7	D5
✓	T5	Interop demo 1588	Jan-2010	Jan 2010	IEEE H7/C7	D4
	T6	Validate time synchronization requirements	May-2010		NIST	D5
	T7	Differences in time stamps C37.118 / IEC 61850	April-2010		TC57/WG10	D3
	T8	Amendments to IEC 61850	Jan-2011		TC57/WG10	D6
	T9	NIST Testbed for 1588 - Requirements	May-2010		NIST	D5

Status	Schedule	Deliverables	Resources

January 2010			
February 2010			
March 2010			
April 2010			

Status of PAP14: Transmission and Distribution Power Systems Model Mapping (11.2.1)

Updated May 7, 2010.

A#	Current Activities and Accomplishments
A3	Reports from IEEE H5 Committees in progress
A4	Use Cases for Advanced Distribution Developed (PAP 8 Coordination done)
A5	IEEE H5 Committee working on settings, results to be forwarded to IEC TC 57 WG10
A6	Advanced Distribution Operations Use Case to be imported into CASE Tool

S	D#	Deliverable
	D1	Report on the impact of C37.239 on CIM and IEC 61850
	D2	A master list of use cases (task 6)
	D3	New and refined use cases (task 7)
	D4	Updates of models (task 9)

I#	Issues, Concerns & Help Needed
I1	Work requires some specialized expertise from participants within the key SDOs IEEE PSRC and IEC TC 57
I2	Need evaluation of IEEE C37.239 in comparison to IEC 61850 and IEC 61970
I3	Need help in Relay Settings standards development integrating IEEE PSRC and IEC Standards

S	T#	Task	Plan	Actual	Resp	D#
	T1	Investigating impact of IEEE PC37.239	Dec-2009			D1
	T2	In the process of creating team to identify Use Cases	April-2010			D2
☑	T3	Creating initial use case team – T&D DEWG	Sep-2009	March-2010		D2
	T4	Creating use case master list, set priorities	Dec-2009			D2
	T5	Refining use cases	Jun-2010			D3
	T6	Reviewing and assigning use cases – WG19 Smart Grid TF to review and assign to other TF's	May-2010			D3
	T7	Working to develop models	Dec-2010			D4

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			

Status of PAP15: Harmonize Power Line Carrier Standards for Appliance Communications in the Home

Updated April 29, 2010.

A#	Current Activities and Accomplishments
A1	Coexistence subgroup meetings occur every two weeks: every 2nd and 4th Tuesday of the month, 11am-12:30pm ET
A2	Agreed on action plan composed of Tasks 1, 2, and 3
A3	Created two PLC focus groups, one on low frequency narrowband and one on high frequency broadband technologies
A3	Received the following documentation • ISP coexistence specifications contained in IEEE P1901 Draft (D2.01) • G.cx coexistence specifications (Recommendation ITU-T G.9972, version consented in Oct. 2009) - see attachment at end of page • Report from EPRI on appliance connector (document refers to an in-line connector, interfacing the homeowner's communications with the appliance) - see attachment at end of page • List of the Functional Technical Requirements developed for the coexistence/interoperability cluster by the IEEE 1901 Working group. • Home Appliance Requirements (AHAM whitepaper) - see attachment at end of page • Open Han requirements - see attachment at end of page
A4	Task 1 and 2 completed - deliverables posted

S	D#	Deliverable
✓	D1	Final Task 1 Deliverable and supporting documents
✓	D2	Final Task 2 Deliverable
●	D3	Intermediate reports available

I#	Issues, Concerns & Help Needed
I1	Ongoing discussions on whether: - Only SDO-based technologies or also proprietary ones should have access to the implementation of coexistence mechanisms - SDO-based technologies should have priority over proprietary or industry alliance backed ones in accessing channel resources

S	T#	Task	Plan	Actual	Resp	D#
✓	T1	Create a list of existing PLC technologies and revise them according to home appliances requirements	March 23rd, 2010	March 23rd, 2010	Subgroup on coexistence	Final deliverable posted
✓	T2	Create a list of existing	March 23rd,	April 13th,	Subgroup on	Final deliverable

	A possible resolution is to adopt the same rationale adopted in IEEE 1901 and ITU-T G.hn: limit access to ISP resources only to specific SDO-based technologies: IEEE 1901 Access and In-Home, and ITU-T G.hn					
I2	Ongoing discussions on whether coexistence should include installed base of PLC technologies and how Partial alleviation of this problem can be achiebved using the techniques described in ITU-T Contribution 09GS-078 (ITU-T_Contribution_09GS-078_for_PAP15.pdf)					

		coexistence mechanisms and revise them according to home appliances requirements	2010	2010	coexistence	posted
	T3	Harmonize coexistence standards if multiple candidates are found	May 11th, 2010		Subgroup on coexistence	Work in progress

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
April 2010			

Status of PAP16: Wind Plant Communications

Updated May 10, 2010.

A#	Current Activities and Accomplishments
A1	Active recruiting of wind experts will continue
A2	John Dunlop to arrange a meeting with the USTAG to IEC TC88
A3	Planning for the Connectivity Week F2F meeting
A4	IEC 61400-25 user group agrees to help
A5	Will participate in the NERC TF2-2 meetings on a regular basis

S	D#	Deliverable
	D1	Requirements related to wind power plant communications from use cases
	D2	Requirements mapping and gaps existing between 61400-25 standard and Task 1use cases
	D3	Best practices on the application of 61400-25 in the US
	D4	Specific recommendations to the IEC TC 88 working group

I#	Issues, Concerns & Help Needed
I1	Need to ensure that this is an open, transparent process
I2	
I3	Coordinate and collaborate with PAP 7
I4	May need to collaborate with PAP 12

S	T#	Task	Plan	Actual	Resp	D#
	T1	Develop requirements related to wind power plant communications from use cases	May-2010		UWIG et al	D1
	T2	Map the requirements of task 1 into 61400-25. Starting with the elements of the Table of Contents of 61400-25	July-2010		UWIG/61400-25 User Group	D2
	T3	Develop a best practices list for the application of 61400-25. Identify opportunities to harmonize the CIM and 61400-25	September-2010		UWIG/All	D3
	T4	Provide specific recommendations to IEC TC 88 through USTAG for 61400-25 and follow-up	November-2010		All/UWIG/61400-25 User Group	D4
	T5	Coordinate with PAP 7 in extending ES-DER	September-2010		PAP 16 / PAP 7	D4

		standards to transmission level				

Status	Schedule	Deliverables	Resources
March2010			
April 2010			